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At-rest (near)Yrast spectroscopy in the 78Ni region with the deuteron induced fission of 238U

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We propose to populate medium spin states of low-Z fission products from transfer-fission reactions by bombarding a ^{238}U thick target with a 26 MeV beam delivered by the LNL Tandem. The objective is to study the energy evolution of N=50 neutron-core breaking states with a view to better quantifying the evolution of the neutron-shell gap, as well as continuing the mapping of intruder states in this region. This will enable us to better understand the origin of the shape coexistence regime that seems to be developing in the close vicinity of ^{78}Ni.

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